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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,342	11/26/2003	Jari Syrjarinne	944-001.122	5263

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EXAMINER	
TRINH, TAN H	
ART UNIT	**PAPER NUMBER**
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/727,342	SYRJARINNE ET AL.	
	Examiner	Art Unit	
	TAN TRINH	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 8 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (U.S. Patent No. 6774838) in view of Syrjarinne (U.S. Pub. No. 20030107514) with Pub. Date (June 12, 2003).

Regarding claim 1, Sun teaches an apparatus (see fig. 2), comprising a ranging receiver (see fig. 2, GPS receiver 10), for providing output signals indicating information as to the position or motion of the ranging receiver (see fig. 2, GPS receiver 10), the apparatus characterized in that: the ranging receiver is responsive to power control signals based on sensor signals indicating whether the ranging receiver is in motion (see figs. 1-3, col. 1, lines 66-col. 2, lines 8), the power control signals for powering on or off selected components of the ranging receiver (se figs. 1-3, col. 1, lines 66-col. 2, lines 16); and in that the apparatus further comprises: a motion sensor (see fig. 2, sensor 41), mechanically coupled to the ranging receiver for providing the sensor signals (see fig. 2, sensor 41 is mechanically coupled to the ranging receiver, col. 2, lines 41-col. 3, line 53).

Still regarding claim 1, Sun teaches the newly added: a motion sensor move when the ranging receiver moves (see fig. 2, sensor 41 is mechanically coupled to the ranging receiver, col. 2, lines 41-col. 3, line 53, since sensor 41 is mechanically coupled to the ranging when the

ranging receiver move the sensor 41 is moving). And Sun also teaches to put the ranging receiver in standby mode as opposed to fully active mode but not fully power off (see col. 2, line 56-col. 3, line 45, since the GPS receiver is in the power saving mode (standby mode) as OFF or ON for every 5 minutes alternately such that the effect of power saving, that is not completed fully power off, the controller of the receiver send out the control signal for set the ON-OFF signal to for power saving mode when the GPS receiver is stationary or moving, the GPS receiver detects the control signal and turn ON and OFF GSP receiver for every 5 minutes for power saving mode with stand by mode). Sun teaches the power control signals for powering on or off selected components as a GPS receiver. But Sun does not mention the selected the specific components of the GPS receiver in standby mode.

However, Syrjarinne teaches the power control signals for powering on or off selected components of the GPS receiver in standby mode (see fig. 1. RF front end 11 and base band processor 14) and fig. 3, steps 34-35, page 2, sections [0016-0022] and page 3, section [0028-0032).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Sun and Syrjarinne, in order to put GPS receiver in standby mode with power saving power on selected components in GPS receiver (see Syrjarinne page 3, section [0032]).

Regarding claim 11, Sun teaches a method for saving power consumed by a ranging receiver (see figs. 1-2), characterized by: a step of reading sensor signals provided by a motion sensor (se figs. 1-3, col. 1, lines 66-col. 2, lines 8); mechanically coupled to the ranging receiver

(see fig. 2, sensor 41 is mechanically coupled to the ranging receiver, col. 2, lines 41-col. 3, line 53); and a step of powering down selected components of the ranging receiver based on whether the sensor signals indicate only at most insubstantial motion of the ranging receiver (see stop moving col. 2, lines 17-40).

Still regarding claim 11, Sun teaches the newly added: to put the ranging receiver in standby mode as opposed to fully active mode but not fully power off (see col. 1, lines 22-27 and col. 2, line 56-col. 3, line 45), since the GPS receiver is in the power saving mode (standby mode) as OFF or ON for every 5 minutes alternately such that the effect of power saving, that is not completed fully power off, the controller of the receiver send out the control signal for set the ON-OFF signal to for power saving mode when the GPS receiver is stationary or moving, the GPS receiver detects the control signal and turn ON and OFF GSP receiver for every 5 minutes for power saving mode with stand by mode). Sun teaches the power control signals for powering on or off selected components as a GPS receiver. But Sun does not mention the selected the specific components of the GPS receiver in standby mode.

However, Syrjarinne teaches the power control signals for powering on or off selected components of the GPS receiver in standby mode (see fig. 1. RF front end 11 and base band processor 14) and fig. 3, steps 34-35, page 2, sections [0016-0022] and page 3, section [0028-0032).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Sun and Syrjarinne, in order to put GPS receiver in standby mode with power saving power on selected components in GPS receiver (see Syrjarinne page 3, section [0032]).

Regarding claims 2-3 and 14, Sun teaches a controller, responsive to the sensor signals, for providing the power control signals so as to power down the selected components of the ranging receiver, if the sensor signals indicate that the ranging receiver is substantially stationary (see stop moving col. 2, lines 17-40).

Regarding claim 4, Sun teaches wherein the controller configured to applies power to the selected components as soon as the motion sensor indicates significant motion of the ranging receiver (see col. 2, lines 17-40).

Regarding claims 5 and 12, Sun teaches a step of re-applying power to the selected components as soon as the motion sensor indicates signification motion of the ranging receiver (see fig.1-2, col. 2, lines 22-26), but not reapplying power for a predetermined time in case of sensor signals indicating motion of at most several centimeter per minute (see (see stop moving col. 2, lines 17-40). In this case the motion is very slow at most several centimeter per minute is obvious to stop moving. Sine the stop or very slow motion to set the sensor to send the output signal to control to turn off or keep in a state of on depend on how one would like to select particular values regarding how slow to be suitable to the system to be send out the signal to turn off of the requirements.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the applied references as claimed, so that the system of the applied references would be suitable to different system requirements.

Regarding claim 6, Sun teaches wherein the motion sensor is a MEMS-based motion sensor (see fig. 2, sensor 41, col. 2, lines 41-47).

Regarding claim 8, Sun teaches further comprising one or more ranging satellites for providing ranging signals conveying navigation information, wherein the apparatus provides the output signals indicating information as to the position or motion of the ranging receiver based on the ranging signals (see fig. 1-2, col. 1, lines 11-15).

Regarding claim 13, Sun teaches a computer program product comprising: a computer readable storage structure embodying computer program code thereon for execution by a computer processor, with said computer program code characterized in that it includes instructions for performing the steps of the method of claim 11 (see col. 1, lines 66-col. 2, lines 40). In this case the CPU to process and operated the position signal from GPS and the information record and or output device 30, that is operated by the program code and execution by CPU.

Regarding claims 15 and 16, Sun teaches an apparatus (see fig. 2), comprising a ranging receiver (see fig. 2, GPS receiver 10), responsive to the power control signals for powering on or off selected components of the ranging receiver (se figs. 1-2, transistor 421 connected to power source selected components to switching on-off, col. 1, lines 66-col. 3, line 6), so to put the ranging receiver in standby mode as opposed to fully active mode but not fully power off (see

col. 1, lines 22-27 and col. 2, line 56-col. 3, line 45), since the GPS receiver is in the power saving mode (standby mode) as OFF or ON for every 5 minutes alternately such that the effect of power saving, and that is not completed fully power off, the controller of the receiver send out the control signal for set the ON-OFF signal to for power saving mode when the GPS receiver is stationary or moving, the GPS receiver detects the control signal and turn ON and OFF GSP receiver for every 5 minutes for power saving mode with stand by mode); and also responsive to ranging signals from sources for positioning (see col. 3, lines 25-28), for providing output signals indicative of the location of the ranging receiver (see col. 3, lines col. 1, lines 10-15, col. 3, lines 29-36); motion sensor (see fig. 2, sensor 41) mean, mechanically coupled to the ranging receiver so as to move with the ranging receiver (see fig. 2, sensor 41 is mechanically coupled to the ranging receiver, col. 2, lines 41-col. 3, line 53, since sensor 41 is mechanically coupled to the ranging when the ranging receiver move the sensor 41 is moving), for providing sensor signals indicating whether the ranging receiver is in motion (see fig. 2, col. 2, lines 41-47 and col. 4, lines 1-10); and controller means, responsive to the sensor signals for providing the power control signals so as to power down the selected components of the ranging receiver if the sensor signals indicates that the ranging receiver is substantially stationary (see fig. 2, power controller 20, power down the selected components transistor 421, and col. 4, 1-40). Sun teaches the power control signals for powering on or off selected components as a GPS receiver. But Sun does not mention the selected the specific components of the GPS receiver in standby mode.

However, Syrjarinne teaches the power control signals for powering on or off selected components of the GPS receiver in standby mode (see fig. 1. RF front end 11 and base band

processor 14) and fig. 3, steps 34-35, page 2, sections [0016-0022] and page 3, section [0028-0032).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Sun and Syrjarinne, in order to put GPS receiver in standby mode with power saving power on selected components in GPS receiver (see Syrjarinne page 3, section [0032]).

Regarding claim 17, Sun teaches a controller is configured to also use the output signals from the ranging receiver in deciding whether to power down the selected components of the ranging receiver by determining whether the out put signals indicate that the ranging receiver is substantially stationary (see fig. 2, controller 20, and the output signals from the ranging receiver GPS receiver 10 to information record 30, col. 2, lines 17-21 and col. 4, lines 1-10).

Regarding claims 18-19, Sun teaches a step of re-applying power to the selected components as soon as the motion sensor indicates signification motion of the ranging receiver (see fig.1-2, col. 2, lines 22-26), but not reapplying power for a predetermined time in case of sensor signals indicating motion of at most several centimeter per minute (see (see stop moving col. 2, lines 17-40). In this case the motion is very slow at most several centimeter per minute is obvious to stop moving. Sine the stop or very slow motion to set the sensor to send the output signal to control to turn off or keep in a state of on depend on how one would like to select particular values regarding how slow to be suitable to the system to be send out the signal to turn off of the requirements.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the applied references as claimed, so that the system of the applied references would be suitable to different system requirements.

3. Claims 9-10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (U.S. Patent No. 6774838) in view of Syrjarinne (U.S. Pub. No. 20030107514) further in view of Haddrell (U.S. Pub. No. 20040209625).

Regarding claim 9, Sun or Syrjarinne teaches the GPS receiver. But Sun or Lau teaches does not mention the cellular communication terminal and cellular communication network.

However, Haddrell teaches the cellular communication terminal and cellular communication network by which the cellular communication terminal is communicative with other communication terminals (see fig. 1, cellular communication terminal 10 and cellular communication network (BS) 14, and page 1, section [0006] a mobile phone 10 with GSM network, the terminal communication with other on during the phone call).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above combination of the teaching of Sun and Syrjarinne with Hasebe, in order to provide user using cell-phone with GPS receiver for detecting a present of position of user location easier.

Regarding claims 10 and 20, Sun or Syrjarinne teaches the GPS receiver. But Sun or Syrjarinne teaches does not mention the cellular communication terminal and cellular communication network.

However, Haddrell teaches a system comprising GPS receiver and a cellular communication terminal and cellular communication network by which the cellular communication terminal is communicative with other communication terminals (see fig. 1, cellular communication terminal 10 and cellular communication network (BS) 14, and page 1, section [0006] a mobile phone 10 with GSM network, the terminal communication with other on during the phone call); and one or more ranging satellites for providing ranging signals conveying navigation information, wherein the apparatus provides the output signals indicating information as to the position or motion of the ranging receiver based on the ranging signals (see fig. 1, satellite 18, providing ranging signals 17, conveying navigation information to GPS receiver 16 on mobile terminal 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above combination of the teaching of Sun and Syrjarinne with Hasebe, in order to provide user using cell-phone with GPS receiver for detecting a present of position of user location easier.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (U.S. Patent No. 6774838) in view of Syrjarinne (U.S. Pub. No. 20030107514) further in view of Yoshioka (U.S. Pub. No. 20010046884).

Regarding claim 7, Sun teaches the sensor is mercury oscillation switch or rolling ball for touching or de-touching opposition nodes and generating the signal of the motion (see fig, 2, sensor 41, col. 2, lines 13-16 and lines 41-49). But Sun or Syrjarinne fails to teach wherein the motion sensor comprises an electronic compass or an accelerometer.

However, Yoshioka teaches the motion sensor comprises an electronic compass or an accelerometer (see fig. 1, Gyro sensor 6 and speed sensor 7, and page 2, section [0032]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Sun and Syrjarinne with Yoshioka on the Gyro sensor and speed sensor technique, in order to provide user with motion sensor using Gyro sensor and speed sensor for detecting the motion on GPS receiver is easier.

Response to Arguments

5. Applicant's arguments filed 02-08-2007 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, the Sun reference discloses turning on or off for all power to a GPS receiver, and does not mention turning on or off power for selected components so as to put the ranging receiver in stand by mode. But the second reference of Syrjarinne-Valio is teaching the "power control signals for power on or off selected components of the GSP receiver (see fig. 1. RF front end 11 and base band processor 14) and fig. 3, steps 34-35, page 2, sections [0016-0022] and

page 3, section [0028-0032), since Syrjarinne-Valio teaches the ranging receiver can have its receiver front end (not Amplifier for transmitter) and base band processing module power on only 300 ms and off (out) for every other second, for a reduction by a factor of six (2000 ms / 300 ms) or the selection components could be turned on only every 100 ms every five seconds, for a reduction in power of factor of 50 (5000 ms/100 ms) (see page 2, section 0022). Therefore, the combination of Sun and Syrjarinne-Valio reference is teaching the limitation of the claims invention.

In addition, applicant argues the Syrjarinne-Valio reference is not teaching the GPS receiver in standby mode, and GPS receiver still provides position estimates, the GPS receiver stopped by turning off the power is actual receiving and Amplifying of received ranging receiving signals and their base band processing. However, the examiner does not agree. Since the reference of Sun and Syrjarinne-Valio teaches the GPS receiver in standby mode (see Sun fig. 3, step 64, power controller controlling OFF or ON of GPS receiver base on OFF or ON signal, and see col. 2, line 56-col. 3, line 45, since the GPS receiver is in the power saving mode (standby mode) as OFF or ON for every 5 minutes alternately such that the effect of power saving, that is not completed fully power off, the controller of the receiver send out the control signal for set the ON-OFF signal to for power saving mode when the GPS receiver is stationary or moving, the GPS receiver detects the control signal and turn ON and OFF GSP receiver for every 5 minutes for power saving mode with stand by mode). And (see Syrjarinne-Valio Abstract and page 2, section [0022] for GPS receiver front end selected components for ON and OFF with factor 2000 ms/300 ms).

Regarding applicant argues the Syrjarinne-Valio reference is teaching the GPS receiver is still provides position estimates, the GPS receiver stopped by turning off the power is actual receiving and Amplifying of received ranging receiving signals and their base band processing. However, the examiner does not agree, since the receiver turn off the front-end receiver, the front-end receiver is include the LNA (low noise amplifier, filter and down converter. e.g. so the ranging receiving signals is not receiving, the GPS receiver is not provides position estimates at that time, when power off the RF front end and base band processor, the GPS receiver stored current navigation data in memory and provide the data when initial tracking loop values for quick signal reacquisition at the power on (see Syrjarinne-Valio page 3, section [0032]).

Regarding applicant argues the Syrjarinne-Valio reference is not discloses providing power control signals for powering on or off the selected components of receiver base on signals from a motion sensor is indicating wherein the receiver is in motion. However, the examiner does nor agree, since the Syrjarinne-Valio reference teaches providing power control signals for powering on or off the selected components of receiver (see page 2, sections [0016-0022] and page 3, section [0028-0032). And Sun teaches the ranging receiver is responsive to power control signals based on sensor signals indicating whether the ranging receiver is in motion (see fig. 2, GPS receiver 10, a motion sensor 41, and col. 1, lines 66-col. 2, lines 8). Therefore, the combination of Sun and Syrjarinne-Valio reference is teaching the limitation of the claims invention.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to the Customer Service Window (now located at the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314).***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

9.. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Division 2618
April 19, 2007

Anderson, Matthew D. (SPE 2618)